In response, the Applicant has amended Claims 9 and 10 in order to clarify and distinctly point out the invention. A substitute Abstract and substitute Figure 3 have also been included. In addition, the typographical errors pointed out by the Examiner have been corrected.

On page 16, lines 16-17, the Examiner believes it is unclear as to how a vacuum chamber may be welded to two structural features. Applicant respectfully believes that those skilled in the art will understand the meaning of this paragraph. It is well known that a vacuum chamber generally consists of a plurality of walls surrounding an air tight interior. Those skilled in the art will appreciate that when the walls of a vacuum chamber are comprised of any number of metals, it is a simple matter to weld, brase or bolt any number of structural features to the chamber. Vacuum chambers typically have an outlet port, such as item 8 in Figure 1, by which a vacuum is applied to the chamber. Vacuum chambers have been in use for well over a hundred years and have applications in fields of technology arranging from chemistry to house cleaning. The art of welding is also ubiquitous. Those skilled in the art would readily understand how two metal objects may be welded together.

Examiner also objects to the term "firmware" on page 19, line 18 as being unclear. Applicant respectfully believes those skilled in the art of computer technology will readily recognize this term as describing a type of software that is located on a particular chip. It is a type of semi-permanent software that may be altered, but not as readily as software may be rewritten. Those skilled in the art of computer technology will readily recognize that devices that repeat the same functions many times over are often controlled using firmware. Printers, fax machines, copiers, and manufacturing equipment are all commonly controlled by firmware. The American Heritage Dictionary of English Language: 4th Edition, 2000, defines firmware as "computer programming instructions that are

stored in a read only memory unit rather than being implemented through software." This is the intended definition of the term "firmware" found on Page 19 of the published specification.

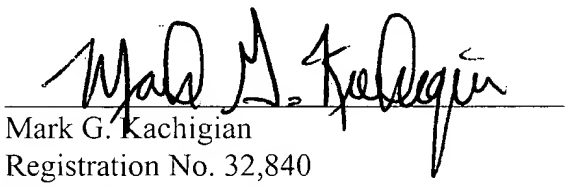
Applicant respectfully believes that amended Claims 9 and 10 overcome the Examiner's rejections. The rejected language of Claim 10 has been removed. In addition, Claim 10 has been rephrased in order to clarify how the computer is attached to other components of the invention such that it is a part of the entire apparatus.

The word "moving" has been added to Claim 9 in order to clarify one of the more significant distinctions between the present invention and that disclosed in the Shimizu et al. patent. The Shimizu et al. patent does not disclose the method of controlling the distance between punched out segments of the film or web by using a computer that calculates the timing of hole punching actuation based on information received from an optical encoder that measures the rotation of a roller. One of the advantages of the present invention is that the film never stops moving throughout the entire hole punching process. This greatly increases the efficiency of production of the film. In contrast, the invention disclosed in Shimizu et al. requires the motion of the film to be halted constantly. In the Shimizu et al. patent, portions of the film are removed from the film and pushed onto ends of an access for a film spindle. Movement of the film must be stopped for the entire time period required to attach two film portions to each end of the film spindle. While the Shimizu et al. patent may be a superior method for formation of film spindles, it discloses a relatively slow and poor method of efficiently producing a film having a series of holes punched through it. The "stop and start" method shown in the Shimizu et al. patent is one of the short comings of the prior art that the present invention overcomes. Therefore, Applicant respectfully believes that the amended claims sufficiently distinguish Applicant's invention from the Shimizu et al. patent, as well as the other prior art.

Also, enclosed is a Request for One-Month Extension of Time and a check in the amount of $55.00 to cover the filing fee.

It is believed that the foregoing is fully responsive to the outstanding Office Action. It is submitted that the application is now in condition for allowance and such action is earnestly solicited.

Respectfully submitted,



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Marked Up Version of Pages 16, 18 and 19 of Specification

The end frames of the machine consist of two major units, upper and lower, which cooperate to allow upward and downward adjustment of a machine head 110 to accommodate proper passage of a film (a.k.a. "web") material including, but not limited to polyethylene, metal, fibrous, or other web material to be punched. The upper unit consists of plate 16, through bored in two locations to allow the passage of bolts 17, and drilled and tapped at one location to accept the threads of jack bolt 13 which is welded at a junction to plate 16 to create a permanent attachment. Plate 18[,] and plate 20 [embodies] embody a milled slot to allow insertion and passage of bolt 19. Plates 16, 18 and 20 are welded together in such a fashion so as to comprise the upper unit of the end frame. The lower unit of the end frame consists of plate 9 which is drilled and tapped to accept bolt 19, and to which are welded plate 10 and plate 11, with said plates, 10 and 11 drilled to allow insertion and passage of bolt 13.

As shown in Figure 1, upward or downward adjustment of the machine head is accomplished by loosening bolt 19 and hex nuts 12 on each side of plate 11, adjusting hex nut 12 on the lower side of plate 11 upward or downward as needed to bring the machine head to the required level, then tightening bolt 19, and hex nuts 12. Two frame members 3 and 5 extend between the plates 9, are separated by blocks 4 and welded to plates 9. Two upper frame members 7 extend between plates 9 and are welded to plates 9 and frame member 3. A "U" shaped vacuum chamber 6 extends between plates 9 and is welded to plates 9 and frame member 5. An outlet tube 8 is welded to vacuum chamber 6 to allow outflow of cut pieces of material to the vacuum system. An aluminum manifold 23 is attached to frame member 7 for each group of solenoid valves 22 on the machine as will be discussed and disclosed further in association with Figure 2.

In Figure 2 a manifold 23 allows a constant supply of regulated air from slave regulator 26 to be applied to solenoid valves 22 at all times by means of plastic tube 25. Each time said solenoid

are produced, holes are to be punched at specific distances and spacings away from the bottom seam in the bag. The present invention is programmed to wait for an electrical impulse from a contact switch 112 on the bag machine [112] indicating that a seam has been made in the bag and holes are to be punched in the web material. The present invention will provide instructions to place punches at specific distances, for example two punches 6" away from the seam, 6 punches 9" away from the seam, and three punches 18" away from the seam. The present invention may be programmed to place holes through a plurality of different locations via a plurality of instruction sequences. After the invention has executed one cycle and fired the proper hole punching plungers, it will stop and wait for another impulse from the bag machine 36 before punching another cycle of holes. Turning now to Figure 3.

Figure 3 illustrates a cross-section of the invention's preferred embodiment punch assembly 1, and die assembly 2, which cooperate to punch holes in a web material 78, while said material is passing between the two units. Each time a solenoid valve 22 receives an electrical impulse from CPU 33, it opens and allows compressed air to flow through tube 21 to [a plunger] punch assembly 1. Compressed air passing through hole 83 in housing cap 50 moves actuator 56 downward which pushes plunger 59 downward overcoming the resistance of spring 62. Movement of actuator 56 is halted when it strikes a step in housing 53. At this point, the compressed air is exhausted through holes 81 [and 85] in housing body 53 and 85 in housing cap 50. Plunger 59 continues to move downward from momentum until the steel ball 65 strikes die unit 2 and rebounds to be held in its original starting position by the force exerted by spring 62. The air compressed by the return of plunger 59 and actuator 56 is exhausted through the vent hole [83] 83 in housing cap 50. Hole 68 in housing 53 allows passage of air to prevent

vacuum drag on plunger 59 as it is returned to its original position by spring 62, and the plunger assembly is ready for another cycle.

Die assembly 2 works in cooperation with plunger assembly 1 to punch holes in material 78 as follows: Plunger 59 containing steel ball 65 is powered downward as explained above. Steel ball 65 strikes the circular hole in die 70. The upper surface of the hole in die 70 which is fabricated from hardened tool steel, has a sharp edge 70'. The sharp edge 70' of the hole in die 70 cooperates with steel ball 65 to cut the material. It will be noted that the die assembly shown in Figure 3 is positioned and held in place in the hole in frame member 5 as follows: Die 70 is contained in a nylon sleeve 71 which is machined to a shape that, working in cooperation with O-ring groove 75 in frame member 5, holds O-ring 73 in position to prevent the die assembly 2 from moving upward during operation of the machine. Retainer ring 72 is placed in a groove in die 70 so as to prevent the die 70 from moving upward out of sleeve 71 during operation. O-ring 73 further functions to allow die assembly 2 to rotate freely in position and to have an amount of side to side movement sufficient to facilitate alignment of steel ball 65 with the hole in the upper surface of die 70 during the cutting process. Turning now to Figure 4.

Figure 4 illustrates an overview logic flow diagram of software process steps according to the invention's preferred embodiment. The computer readable and executed instruction set of the present invention can be embodied as either software, firmware [of] or a combination thereof. Such embodiment of said computer readable and executed instruction sets are well known and practiced by those skilled in the art.

The computer readable and executed instruction set of the present invention first receives an impulse from the encoder device mounted on a roller over which a film is passed 90. The software